

# EXHIBIT D

**PBI**

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

D462

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UNITED STATES OF AMERICA

Plaintiff,

v.

CYTEC INDUSTRIES, INC.,  
FORD MOTOR COMPANY,  
SPS TECHNOLOGIES, INC.  
and  
TI AUTOMOTIVE SYSTEMS CORP.

Defendants.

ENTERED  
MAR 14 2002  
CLERK OF COURT  
CIVIL ACTION NO. 01cv6109

FILED  
MAR 14 2002  
By MICHAEL E. ROY, Clerk  
Dep. Clerk

CONSENT DECREE

90-11-2-06036/2

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FOR THE EASTERN DISTRICT OF PENNSYLVANIA

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Plaintiff,  
v.

CYTEC INDUSTRIES INC.,  
FORD MOTOR COMPANY,  
SPS TECHNOLOGIES, INC.,  
TI GROUP AUTOMOTIVE SYSTEMS  
CORPORATION

Defendants.

Civil Action No. 01cv6109

CONSENT DECREE

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## CONSENT DECREE

### I. BACKGROUND

A. The United States of America ("United States"), on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), filed a complaint in this matter pursuant to Sections 106 and 107 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§ 9606 and 9607.

B. The United States in its complaint seeks, inter alia: (1) reimbursement of costs incurred by EPA and the Department of Justice for response actions at the Boarhead Farms Superfund Site ("Site," as defined below) in Upper Black Eddy, Bridgeton Township, Bucks County, Pennsylvania, together with accrued interest; and (2) performance of studies and response work by the defendants at the Site consistent with the National Oil and Hazardous Substances Pollution Contingency Plan 40 C.F.R. Part 300 (as amended) ("NCP").

C. In accordance with the NCP and Section 121(f)(1)(F) of CERCLA, 42 U.S.C. § 9621(f)(1)(F), EPA initially notified the Commonwealth of Pennsylvania (the "State" or "the Commonwealth") on December 30, 1997 of negotiations with potentially responsible parties ("PRPs") regarding the implementation of the remedial design and remedial action ("RD/RA") for the Site, and EPA provided the State with an opportunity to participate in such negotiations and be a party to the Consent Decree. The State declined to participate at that time. EPA subsequently entered into a Consent Decree with three PRPs for the Boarhead Farms Superfund Site ("Site" or "Boarhead Site") for a portion of the RD/RA work on April 13, 2000. That

Consent Decree (hereinafter referred to as the "OU-1 Consent Decree") was entered by the United States District Court for the Eastern District of Pennsylvania on September 28, 2000. EPA contacted the State again on August 21, 2000 to notify it of further negotiations with PRPs for implementation of the remaining RD/RA work at the Site and to provide the State with an opportunity to participate in such negotiations and be a party to this Consent Decree. The State declined the opportunity to be a party to this Consent Decree on September 25, 2000.

D. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), EPA notified the United States Department of the Interior on August 24, 1992 and January 31, 1997, and the National Oceanic and Atmospheric Administration ("NOAA") on August 24, 1992, of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal trusteeship and encouraged the trustee(s) to participate in the negotiation of this Consent Decree.

E. The defendants that have entered into this Consent Decree ("Settling Defendants") do not admit any liability to the Plaintiff arising out of the transactions or occurrences alleged in the complaint, nor do they acknowledge that the release or threatened release of hazardous substances at or from the Site constitutes an imminent or substantial endangerment to the public health or welfare or the environment.

F. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on March 31, 1989, 54 Fed. Reg. 13296.

G. In response to a release or a substantial threat of a release of a hazardous substance(s) at or from the Site, EPA commenced on December 5, 1989, a Remedial Investigation and Feasibility Study ("RI/FS") for the Site pursuant to 40 C.F.R. § 300.430.

H. EPA completed an Ecological Risk Assessment in September 1995. The Baseline Risk Human Health Risk Assessment was also completed in September 1995. Based on these documents and the Remedial Investigation ("RI"), a Feasibility Study ("FS") was prepared in July 1997, describing the remedial action objectives and comparing cleanup alternatives for the Site.

I. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the FS and of the proposed plan for remedial action on January 5, 1998, in a major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action. A copy of the transcript of the public meeting is available to the public as part of the administrative record upon which the Regional Administrator based the selection of the response action.

J. The decision by EPA on the remedial action to be implemented at the Site is embodied in a final Record of Decision ("ROD"), executed on November 18, 1998, on which the State has given its concurrence. The ROD includes EPA's explanation for any significant differences between the final plan and the proposed plan as well as a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA, 42 U.S.C. Section 9617(b).



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K. Subsequent to the issuance of the ROD, EPA determined to implement the remedial design ("RD") and remedial action ("RA") described in the ROD in two operable units ("OUs"). OU-1 (as defined below), in general, will address Remedy Components 3, 4, 5, 6, and 7 outlined in the ROD Declaration (Appendix A). These include:

- Remedy Component 3- Groundwater Extraction, Metals Precipitation, and Air Stripping
- Remedy Component 4- Installation of Additional Monitoring Wells
- Remedy Component 5- Institutional Controls and Monitoring for OU-1
- Remedy Component 6- Residential Water Treatment
- Remedy Component 7- Phytoremediation

OU-2, in general, will address Remedy Components 1, 2, and 5 outlined in the ROD Declaration (Appendix A) and any other work described in the ROD that was not required by the OU-1

Consent Decree. These include:

- Remedy Component 1- Soil Aeration and Treatment of VOC Hot Spots
- Remedy Component 2- Excavation and Offsite Disposal of Buried Drums
- Remedy Component 5- Institutional Controls and Monitoring for OU-2

L. Under the terms of this Consent Decree, the Settling Defendants will assume responsibility for the performance of a portion of the RD and all of the RA for all OU-2 Activities (together, the "Work"), as defined below.

M. Based on the information presently available to EPA, EPA believes that the Work will be properly and promptly conducted by the Settling Defendants if conducted in accordance with the requirements of this Consent Decree and its appendices.

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N. Solely for the purposes of Section 113(j) of CERCLA, the Remedial Action selected by the ROD and the Work to be performed by the Settling Defendants shall constitute a response action taken or ordered by the President.

O. The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and implementation of this Consent Decree will expedite the cleanup of the Site and will avoid prolonged and complicated litigation between the Parties, and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, it is hereby Ordered, Adjudged, and Decreed:

## **II. JURISDICTION**

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1345, and 42 U.S.C. §§ 9606, 9607, and 9613(b). This Court also has personal jurisdiction over the Settling Defendants. Solely for the purposes of this Consent Decree and the underlying complaint, Settling Defendants waive all objections and defenses that they may have to jurisdiction of the Court or to venue in this District. The Settling Defendants shall not challenge the terms of this Consent Decree, and the Settling Defendants shall not challenge this Court's jurisdiction to enter and enforce this Consent Decree.

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### **III. PARTIES BOUND**

2. This Consent Decree applies to and is binding upon the United States and upon Settling Defendants and their successors and assigns. Any change in ownership or corporate status or other legal status of a Settling Defendant including, but not limited to, any transfer of assets or real or personal property, shall in no way alter such Settling Defendant's responsibilities under this Consent Decree.

3. Settling Defendants shall provide a copy of this Consent Decree to each contractor hired to perform the Work (as defined below) required by this Consent Decree and to each person representing any Settling Defendant with respect to the Site or the Work and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this Consent Decree. Settling Defendants or their contractors shall provide written notice of the Consent Decree to all subcontractors hired to perform any portion of the Work required by this Consent Decree. Settling Defendants shall nonetheless be responsible for ensuring that their contractors and subcontractors perform the Work contemplated herein in accordance with this Consent Decree. With regard to the activities undertaken pursuant to this Consent Decree, each contractor and subcontractor shall be deemed to be in a contractual relationship with the Settling Defendants within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).

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#### IV. DEFINITIONS

4. Unless otherwise expressly provided herein, terms used in this Consent Decree which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Consent Decree or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

"Consent Decree" shall mean this Decree and all appendices attached hereto (listed in Section XXIX). In the event of conflict between this Decree and any appendix, this Decree shall control.

"OU-1 Consent Decree" shall mean the consent decree and all appendices attached thereto entered by the United States District Court for the Eastern District of Pennsylvania on September 28, 2000. The OU-1 Consent Decree provides for implementation of OU-1 Activities.

"Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

"Duly Authorized Representative" shall mean a person set forth or designated in accordance with the procedures set forth in 40 C.F.R. § 270.11(b).

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"EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

"Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Consent Decree, verifying the Work, or otherwise implementing, overseeing, or enforcing this Consent Decree, including, but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Sections VII, IX (including, but not limited to, attorneys fees and any monies paid to secure access and/or to secure or implement institutional controls including the amount of just compensation), XV, and Paragraph 87 of Section XXI. Future Response Costs shall also include all Interim Response Costs, and all Interest on the Past Response Costs that has accrued pursuant to 42 U.S.C. § 9607(a) during the period from the lodging of this Consent Decree to the date of entry of this Consent Decree.

"Interim Response Costs" shall mean all costs, including direct and indirect costs, (a) paid by the United States in connection with the Site between July 31, 2000 and the effective date of this Consent Decree, or (b) incurred prior to the effective date of this Consent Decree but paid after that date.

"Interest" shall mean interest at the rate specified for interest on investments of the Hazardous Substance Superfund established under Subchapter A of Chapter 98 of Title 26 of the U.S. Code, compounded on October 1 of each year, in accordance with 42 U.S.C. § 9607(a).

"Municipal Sewage Sludge" shall mean any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage, and may include residue removed, all or in part, during the treatment of wastewater from manufacturing or processing operations, provided that such residue has essentially the same characteristics as residue removed during the treatment of domestic sewage.

"Municipal Solid Waste" shall mean household waste and solid waste collected from non-residential sources that is essentially the same as household waste. While the composition of such wastes may vary considerably, municipal solid waste generally is composed of large volumes of non-hazardous substances (e.g., yard waste, food waste, glass, and aluminum) and can contain small amounts of other wastes as typically may be accepted in RCRA Subtitle D landfills.

"National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

"Operation and Maintenance" or "O & M" shall mean all activities required to maintain the effectiveness of the Remedial Action as required under the Operation and Maintenance Plan approved or developed by EPA pursuant to this Consent Decree.

"OU-1" or "OU-1 Activities" shall mean all of those activities described in the ROD that address Remedy Components 3, 4, 5, 6, and 7 outlined in the ROD Declaration (Appendix A).

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These include, but are not limited to:

- Remedy Component 3- Groundwater Extraction, Metals Precipitation, and Air Stripping
- Remedy Component 4- Installation of Additional Monitoring Wells
- Remedy Component 5- Institutional Controls and Monitoring for OU-1
- Remedy Component 6- Residential Water Treatment
- Remedy Component 7- Phytoremediation

"OU-2" or "OU-2 Activities" shall mean those activities described in the ROD that address Remedy Components 1, 2, and 5 as described in the ROD Declaration (Appendix A), and any other work described in the ROD that was not addressed by the OU-1 Consent Decree. OU-2 or OU-2 Activities include, but are not limited to:

- Remedy Component 1- Soil Aeration and Treatment of VOC Hot Spots
- Remedy Component 2- Excavation and Offsite Disposal of Buried Drums
- Remedy Component 5- Institutional Controls and Monitoring for OU-2

"Oversight Costs" shall mean that portion of Future Response Costs incurred by EPA in monitoring and supervising the Settling Defendants' performance of the Work to determine whether such performance is consistent with the requirements of this Consent Decree, including costs incurred in reviewing plans, reports and other documents submitted pursuant to this Consent Decree, as well as costs incurred in overseeing implementation of the Work; however, Oversight Costs do not include, *inter alia*: (1) the costs of action by EPA to investigate, evaluate or monitor a release, threat of release, or a danger posed by such release or threat of release; (2) the costs of litigation or other enforcement activities; (3) the costs of determining the need for or taking direct response action by EPA to conduct a removal or remedial action at the Site, including but not limited to, the cost of activities by EPA pursuant to Section VII (Remedy

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Review) and Section XV (Emergency Response) of this Consent Decree; (4) the costs of undertaking the periodic review set forth in Section VII (Remedy Review) or otherwise determining whether or to what extent the Work has reduced the release or threat of release at the Site; (5) the cost of enforcing the terms of this Consent Decree, including all costs incurred in connection with Dispute Resolution pursuant to Section XIX (Dispute Resolution); (6) the costs of securing access under Section IX (Access and Institutional Controls); and (7) the cost of actions taken pursuant to Section VI (Performance of the Work by Settling Defendants), Paragraph 14 of this Consent Decree.

"Owner, Operator, as Lessee of Residential Property" shall mean a person who owns, operates, manages, or leases Residential Property and who uses or allows the use of the Residential Property exclusively for residential purposes.

"PADEP" shall mean the Pennsylvania Department of Environmental Protection and any predecessor or successor departments or agencies of the State.

"Paragraph" shall mean a portion of this Consent Decree identified by an arabic numeral or an upper case letter.

"Parties" shall mean the United States and the Settling Defendants.

"Past Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States paid at or in connection with the Site through July 31, 2000, plus Interest on all such costs which has accrued pursuant to 42 U.S.C. § 9607(a) through such date.

"Performance Standards" shall mean the cleanup standards and other measures of achievement for all OU-2 Activities as defined herein and as set forth in Section X.A, B and D



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of the ROD (as defined below), those for all OU-2 Activities set forth on pages 33-39 of the ROD and those that are developed by the Settling Defendants and approved by EPA in writing during Remedial Design.

"Plaintiff" shall mean the United States.

"RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901 et seq. (also known as the Resource Conservation and Recovery Act).

"Record of Decision" or "ROD" shall mean the EPA Record of Decision relating to the Site signed on November 18, 1998 by the Regional Administrator, EPA Region III, or his/her delegate, and all attachments thereto. The ROD is attached as Appendix A.

"Remedial Action" or "RA" shall mean those activities, except for Remedial Design and Operation and Maintenance, to be undertaken by the Settling Defendants to implement all OU-2 activities as defined herein, in accordance with the final Remedial Design and Remedial Action Work Plans and other plans approved by EPA.

"Remedial Action Work Plan" shall mean the document developed pursuant to Paragraph 11 of this Consent Decree and approved by EPA, and any amendments thereto.

"Remedial Design" or "RD" shall mean those activities to be undertaken by the Settling Defendants to develop the final plans and specifications for the Remedial Action with respect to all OU-2 activities as defined herein pursuant to the Remedial Design Work Plan and other plans approved by EPA.

"Remedial Design Work Plan" shall mean those documents developed pursuant to Paragraph 11 of this Consent Decree and approved by EPA, and any amendments thereto.

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"Residential Property" shall mean single or multi-family residences, including accessory land, buildings, or improvements incidental to such dwellings, which are exclusively for residential use.

"Response Costs" shall mean Future Response Costs, Interim Response Costs and Past Response Costs.

"Section" shall mean a portion of this Consent Decree identified by a roman numeral.

"Settling Defendants" shall mean Cytec Industries Inc., Ford Motor Company, SPS Technologies, Inc. and TI Group Automotive Systems Corporation.

"Site" shall mean the Boarhead Farms Superfund Site, encompassing approximately 120 acres, located on Lonely Cottage Road in Upper Black Eddy, Bridgeton Township, Bucks County, Pennsylvania, and depicted in the ROD. A map of the Site is attached hereto as Appendix D.

"Small Business" shall mean any business entity that employs no more than 100 individuals and is a "small business concern" as defined under the Small Business Act (15 U.S.C. §§ 631 et seq.).

"Small Nonprofit Organization" shall mean any organization that does not distribute any part of its income or profit to its members, directors, or officers, employs no more than 100 paid individuals at the involved chapter, office, or department, and was recognized as a nonprofit organization under Section 501(c)(3) of the Internal Revenue Code of 1986.

"State" or "Commonwealth" shall mean the Commonwealth of Pennsylvania.

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"Supervising Contractor" shall mean the principal contractor retained by the Settling Defendants to supervise and direct the implementation of the Work under this Consent Decree.

"United States" shall mean the United States of America, including its agencies, departments, and instrumentalities.

"Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33), 42 U.S.C. § 9601(33); and (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

"Work" shall mean all activities Settling Defendants are required to perform under this Consent Decree to perform the RD and RA for all OU-2 Activities, except those required by Section XXV (Retention of Records).

## **V. GENERAL PROVISIONS**

### **5. Objectives of the Parties**

The objectives of the Parties in entering into this Consent Decree are to protect public health or welfare and the environment at the Site by the design and implementation of response actions at the Site by the Settling Defendants, to reimburse response costs of the Plaintiff, and to resolve the claims of Plaintiff against Settling Defendants as provided in this Consent Decree. Except for the purposes of implementing and enforcing the terms of this Consent Decree, the execution by the Settling Defendants of this Consent Decree is not an admission by them of liability with respect to any issue dealt with in this Consent Decree nor is it an admission or denial of the

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allegations set forth in the Complaint filed by the Plaintiff herein. This Consent Decree shall not be admissible as evidence in any proceeding other than one to enforce terms of this Consent Decree.

6. Commitments by Settling Defendants

a. Settling Defendants shall finance and perform the Work as specified in Section VI of this Consent Decree. Settling Defendants shall also reimburse the United States for Past Response Costs and Future Response Costs as provided in this Consent Decree.

b. The obligations of Settling Defendants to finance and perform the Work and to pay amounts owed the United States under this Consent Decree are joint and several. In the event of the insolvency or other failure of any one or more Settling Defendants to implement the requirements of this Consent Decree, the remaining Settling Defendants shall complete all such requirements.

c. In the event that any of the Settling Defendants files for bankruptcy or is placed involuntarily in bankruptcy proceedings, such Settling Defendant shall notify the United States within three (3) days of such filing.

7. Compliance With Applicable Law

All activities undertaken by Settling Defendants pursuant to this Consent Decree shall be performed in accordance with the requirements of all applicable federal and state laws and regulations. Settling Defendants must also comply with all applicable or relevant and appropriate requirements of all Federal and state environmental laws as set forth in the ROD.

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the response action not inconsistent with the NCP pursuant to Section XVI (Payments for Response Costs).

53. Nothing in the preceding Paragraph or in this Consent Decree shall be deemed to limit any authority of the United States: (a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site; or (b) to direct or order such action, or seek an order from the Court, to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, subject to Section XXI (Covenants Not to Sue by Plaintiff).

#### **XVI. PAYMENTS FOR RESPONSE COSTS**

##### **54. Payments for Past Response Costs**

Within ninety (90) days of the effective date of this Consent Decree, Settling Defendants shall pay to EPA \$7,000,000 in payment for Past Response Costs. Payment shall be made by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice account in accordance with current EFT procedures, referencing USAO File Number 2000V00579, EPA Site/Spill ID No. 03Y2, and DOJ Case Number 90-11-2-06036-2. Payment shall be made in accordance with instructions provided to the Settling Defendants by the Financial Litigation Unit of the United States Attorney's Office for the Eastern District of Pennsylvania following lodging of the Consent Decree. Any payments received by the Department of Justice after 4:00 p.m. (Eastern Time) will be credited on the next business day. Settling Defendants shall send notice

that such payment has been made to the United States as specified in Section XXVI (Notices and Submissions) and to the Docket Clerk (3RC00), United States Environmental Protection Agency, 1650 Arch Street, Philadelphia, PA 19103-2029. At the time of payment, Settling Defendants shall send copies of the check(s) to the United States as specified in Section XXVI (Notices and Submissions) and to the Docket Clerk (3RC00), United States Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, PA 19103-2029. The total amount to be paid by Settling Defendants pursuant to this Subparagraph 54 shall be deposited in the EPA Hazardous Substance Superfund.

**55. Payments for Future Response Costs**

a. Settling Defendants shall reimburse the EPA Hazardous Substance Superfund for all Future Response Costs not inconsistent with the National Contingency Plan. The United States will send Settling Defendants a bill requiring payment that includes a cost summary, setting forth direct and indirect costs incurred by EPA, DOJ, and their contractors on a periodic basis. Within fourteen (14) days after Settling Defendants receive the bill, they may make a written request to EPA for the supporting cost documentation. This supporting cost documentation shall include cost summary reports, work assignments, technical work assignment status reports, direction documents, delivery orders, and other related documents for EPA and its contractors as applicable but not including confidential business information. Settling Defendants shall make payments of all portions of Future Response Costs for which Settling Defendants have not made a written request for supporting cost documentation within forty-five (45) days of Settling Defendants' receipt of each bill requiring payment. If the

Settling Defendants request supporting cost documentation for any portion of Future Response Costs in a timely manner, payment for those portions of Future Response Costs for which Settling Defendants have requested supporting cost documentation shall be made within ninety (90) days after Settling Defendants' receipt of the supporting cost documentation, except as otherwise provided in Paragraph 56. The Settling Defendants shall make all payments required by this Paragraph in the form of a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund" and referencing the name and address of the party making the payment, EPA Site/Spill ID No. 03Y2, and DOJ Case Number 90-11-2-06036-2. Settling Defendants shall send the check(s) to United States Environmental Protection Agency, Region III, Attention: Superfund Accounting, P.O. Box 360515, Pittsburgh, PA 15251-6515, and shall send copies of the check(s) to the United States as specified in Section XXVI (Notices and Submissions) and to the Docket Clerk (3RC00), United States Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, PA 19103-2029. The total amount to be paid by Settling Defendants pursuant to Subparagraph 55.a shall be deposited in the EPA Hazardous Substance Superfund.

b. Notwithstanding Paragraph 55.a, the Settling Defendants shall be obligated to reimburse the United States for Oversight Costs incurred in connection with Remedial Design and oversight of Removal Actions only if the decision in United States v. Rohm & Haas Co., No. 92-1517 (3rd Cir. Aug. 12, 1993), regarding the liability of responsible parties under Section 107(a)(4)(A) of CERCLA for EPA oversight costs is reversed or overturned by the Court of Appeals for the Third Circuit, the United States Supreme Court, or the United States Congress

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through amendment to CERCLA or otherwise. Nothing in this Paragraph 55.b shall be deemed to be an adjudication by this Court or an admission by EPA or the United States or shall be admissible in any other proceeding as to the legal issue whether oversight costs are properly recoverable under Section 107 of CERCLA or pursuant to a settlement of such an action.

56. Settling Defendants may contest payment of any Future Response Costs under Paragraph 55 only if they determine that the United States has made an accounting error or if they allege that a cost item that is included represents costs that are inconsistent with the NCP. Such objection shall be made in writing within thirty (30) days of receipt of the bill or in the event supporting cost documentation is timely requested, within ninety (90) days of receipt of the supporting cost documentation, and must be sent to the United States pursuant to Section XXVI (Notices and Submissions). Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, the Settling Defendants shall within the thirty (30) day or ninety (90) day period pay all uncontested Future Response Costs to the United States in the manner described in Paragraph 55. Simultaneously, the Settling Defendants shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the Commonwealth of Pennsylvania and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. The Settling Defendants shall send to the United States, as provided in Section XXVI (Notices and Submissions), a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow



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account is established as well as a bank statement, or other official documentation of deposit by the bank showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, the Settling Defendants shall initiate the Dispute Resolution procedures in Section XIX (Dispute Resolution). If the United States prevails in the dispute, within twenty (20) days of the resolution of the dispute, the Settling Defendants shall pay the sums due (with accrued interest) to the United States in the manner described in Paragraph 55. If the Settling Defendants prevail concerning any aspect of the contested costs, the Settling Defendants shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to the United States in the manner described in Paragraph 55; Settling Defendants shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XIX (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding the Settling Defendants' obligation to reimburse the United States for its Future Response Costs.

57. In the event that the payments required by Subparagraph 54 are not made within ninety (90) days of the effective date of this Consent Decree or the payments required by Paragraph 55 are not made within forty-five (45) days of the Settling Defendants' receipt of the bill, or if supporting cost documentation is timely requested, within ninety (90) days after receipt of the supporting cost documentation, Settling Defendants shall pay Interest on the unpaid balance, except for any portion of the balance on which Settling Defendants contest and prevail pursuant to Paragraph 56. The Interest to be paid on Past Response Costs under this Paragraph shall begin to accrue thirty (30) days after the effective date of this Consent Decree. The Interest on Future

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Response Costs shall begin to accrue on the date of the bill, or in the event supporting documentation is requested, within ninety (90) days after receipt of the supporting documentation. The Interest shall accrue through the date of the Settling Defendants' payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiff by virtue of Settling Defendants' failure to make timely payments under this Section. The Settling Defendants shall make all payments required by this Paragraph in the manner described in Paragraph 55.

#### **XVII. INDEMNIFICATION AND INSURANCE**

58. a. The United States does not assume any liability by entering into this agreement or by virtue of any designation of Settling Defendants as EPA's authorized representatives under Section 104(e) of CERCLA. Settling Defendants shall indemnify, save, and hold harmless the United States and its officials, agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Settling Defendants, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Consent Decree, including, but not limited to, any claims arising from any designation of Settling Defendants as EPA's authorized representatives under Section 104(e) of CERCLA. Further, the Settling Defendants agree to pay the United States all costs it incurs including, but not limited to, attorneys fees and other expenses of litigation and settlement arising from, or on account of, claims made against the United States

plan approved by EPA under this Consent Decree that do not materially alter the requirements of those documents may be made by written agreement between the EPA Project Coordinator, after providing the State with a reasonable opportunity to review and comment on the proposed modification, and the Settling Defendants. Modifications to the Work made pursuant to Paragraph 14 ("Modification of the Work") may be made by EPA. Nothing in this Decree shall be deemed to alter the Court's power to enforce, supervise, or approve modifications to this Consent Decree.

#### **XXXII. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT**

111. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) days for public notice and comment in accordance with Section 122(d)(2) of CERCLA, 42 U.S.C. § 9622(d)(2), and 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations which indicate that the Consent Decree is inappropriate, improper, or inadequate. Settling Defendants consent to the entry of this Consent Decree without further notice.

112. If for any reason the Court should decline to approve this Consent Decree in the form presented, this agreement is voidable at the sole discretion of any Party and the terms of the agreement may not be used as evidence in any litigation between the Parties.

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### **XXXIII. SIGNATORIES/SERVICE**

113. Each undersigned representative of a Settling Defendant to this Consent Decree and the Assistant Attorney General for Environment and Natural Resources of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind such Party to this document.

114. Each Settling Defendant hereby agrees not to oppose entry of this Consent Decree by this Court or to challenge any provision of this Consent Decree unless the United States has notified the Settling Defendants in writing that it no longer supports entry of the Consent Decree.

115. Each Settling Defendant shall identify, on the attached signature page, the name, address, and telephone number of an agent who is authorized to accept service of process by mail on behalf of that Party with respect to all matters arising under or relating to this Consent Decree. Settling Defendants hereby agree to accept service in that manner and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including, but not limited to, service of a summons.

### **XXXIV. RELATIONSHIP BETWEEN CONSENT ORDER AND CONSENT DECREE**

116. The United States and the Settling Defendants have agreed that certain portions of the Work shall commence in accordance with Administrative Order on Consent, EPA Docket No. III-2001-0010DC, ("Consent Order") prior to the effective date of this Consent Decree. Upon the effective date of this Consent Decree, and as set forth in Section III of the Consent Order, the Consent Order shall terminate. It is agreed by the Parties, that upon termination of the

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Consent Order due to entry of this Consent Decree, performance of work commenced under the Consent Order shall continue under this Consent Decree in accordance with the EPA-approved schedules and requirements developed under the Consent Order. To the extent that Settling Defendants have fulfilled obligations under the Consent Order that are also required by this Consent Decree, Settling Defendants shall also be deemed to have fulfilled such obligations under this Consent Decree.

**XXXV. FINAL JUDGMENT**

117. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment between and among the United States, the State, and the Settling Defendants. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

SO ORDERED THIS 13<sup>th</sup> DAY OF Mar, 2002

Debrae B. Tucker  
United States District Judge

# EXHIBIT E



## Superfund

You are here: [EPA Home](#) [Superfund](#) [Laws, Policy & Guidance](#) [Key Policies and Guidances](#) SPIM 2008/2009

# Superfund Program Implementation Manual (SPIM) Fiscal Year 2008/2009

OSWER 9200.3-14-1G-S  
April 1, 2007

Program Implementation Guidance for OSRTI, OSRE, FFRRO, FFEO and OEM  
(Removals)

You will need the free Adobe Reader to view some of the files on this page. See [EPA's PDF page](#) to learn more.

**DISCLAIMER:** The policies and procedures established in this document are intended solely for the guidance of employees of the U.S. Environmental Protection Agency. They are not intended and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. EPA reserves the right to act at variance with these policies and procedures and to change them at any time without public notice.

**CONTACTS:** Please see the list of subject matter experts (SME) with phone numbers, at the end of each Chapter and Appendix. To email an SME, use the following format: 'lastname.firstname@epa.gov' and please copy [white.robert@epa.gov](mailto:white.robert@epa.gov).

### Authorization Documents

[Letter \(PDF\)](#) (28K, 1 pg)  
[Letter \(Change 1\) \(PDF\)](#) (20K, 2 pp)  
[Distribution \(PDF\)](#) (17K, 1 pg)  
[Distribution \(Change 1\) \(PDF\)](#) (12K, 1 pg)  
[Impact Statement \(PDF\)](#) (28K, 2 pp)  
[Impact Statement \(Change 1\) \(PDF\)](#) (28K, 1 pg)

### Organization Documents

[Cover \(PDF\)](#) (32K, 1 pg)  
[Managers' Schedule of Significant Events \(Change 1\) \(PDF\)](#) (454K, 26 pp)  
[Acronym List \(PDF\)](#) (62K, 8 pp)  
[Organization Charts \(PDF\)](#) (310K, 8 pp)  
[Table of Contents \(PDF\)](#) (496K, 15 pp)  
[Change Log \(PDF\)](#) (21K, 3 pp)

### Program Goals and Planning Requirements (PDF) (32K, 1 pg)

[Chapter I: Introduction \(PDF\)](#) (170K, 12 pp)  
[Chapter II: Superfund Budget Planning Process And Financial Management \(Change 1\) \(PDF\)](#) (290K, 45 pp)  
[Chapter III: Program Planning and Reporting Requirements \(Change 1\) \(PDF\)](#) (123K, 22 pp)

### Program Implementation Procedures (PDF) (32K, 1 pg)

[Appendix A: Site Assessment/NPL Listing \(PDF\)](#) (489K, 40 pp)  
[Appendix B: Response Actions \(Change 1\) \(PDF\)](#) (456K, 75 pp)  
[Appendix C: Enforcement \(Change 1\) \(PDF\)](#) (168K, 44 pp)  
[Appendix D: Federal Facility Response \(Change 1\) \(PDF\)](#) (347K, 50 pp)  
[Appendix E: Information Systems \(Change 1\) \(PDF\)](#) (148K, 18 pp)  
[Appendix F: Removals \(Change 1\) \(PDF\)](#) (49K, 12 pp)  
[Appendix G: Government Performance and Results Act \(GPRA\) \(Change 1\) \(PDF\)](#) (40K, 11 pp)

[Appendix H: Community Involvement \(PDF\)](#) (184K, 14 pp)

**Links to SPIMs**

[FY 02/03 SPIM](#)

[FY 04/05 SPIM](#)

[FY 06/07 SPIM](#)

**Superfund Help:** [Acronyms](#) | [Topics](#) | [Frequent Questions](#) | [Publications](#) | [Sitemap](#)



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## **Superfund Program Implementation Manual FY 08/09**

### **Appendix F: Removals**

**(Applicable to all OSWER Removal regardless of financing)**

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## Appendix F Removals

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## APPENDIX F

### FY08/09 REMOVAL TARGETS AND MEASURES

#### ***F.A.1 PROTECT HUMAN HEALTH AND THE ENVIRONMENT***

Protection of human health and the environment remains the highest priority for the Superfund Program. EPA will continue to address the worst sites first while balancing the need to complete response actions at sites. The Agency will ensure that available resources are disbursed in a fiscally sound manner. Maximizing Potentially Responsible Party (PRP) involvement remains a high priority.

##### **a. Removal Actions**

The goal of EPA's emergency response and removal program is to provide quick response to immediate threats to public health and the environment from releases of hazardous substances whenever and wherever they occur.

EPA will continue to enhance its emergency response infrastructure through procurement of state-of-the-art response equipment and continued training and exercising of response personnel. EPA will also ensure that the appropriate resources and contract vehicles are available to conduct necessary removal actions.

##### **b. Homeland Security**

EPA played a crucial role in response to the terrorist attacks of September 11, 2001, particularly, through its emergency response program. Subsequently, the Agency has played a major role in response to anthrax attacks, the crash of the Columbia space shuttle in Texas, and natural disasters (primarily Hurricanes Katrina and Rita). In each case, the Agency has developed lessons learned from the response and is making appropriate adjustments to our standard procedures. A major development is the National Approach to Response (NAR) that addresses a variety of issues related to improving EPA's response capabilities (e.g., health and safety, training and exercises, communications (both internally and with the public at large), and equipment.

The 2006-2011 Strategic Plan calls for the emergency response and removal program to meet the following target: "By 2011, achieve and maintain at least 95 percent of the maximum score on readiness evaluation criteria." In 2007, EPA is revising the readiness criteria (known as "Core ER") for the regions and developing new criteria for all appropriate headquarters offices and Special Teams that are likely to be involved in a response. The score reported for the Strategic Plan will be a weighted composite of all the scores for headquarters, Special Teams, and the regions.

EPA's field response capability relies on a support infrastructure including specialized equipment, equipment inventories, and laboratory support. The Agency will continue to build on its equipment support by identifying state-of-the-art detection, monitoring, and response equipment designed to address chemical, biological, and radiological agents. Also, EPA will build inventories of standard response equipment such as personal protective gear to ensure that it is prepared to respond to multiple incidents. Equipment will be maintained and replaced as necessary to ensure the Agency has the best technology available.

EPA's field responders and National Response System special forces require extensive training in a variety of response-related areas, including scientific and technical training for detection, analysis, and response to chemical, biological, and radiological agents; and training in incident command system response management processes. Training courses will be developed and implemented for different levels of response experience and involvement, including refresher courses for senior, experienced responders; in-depth training for newer responders in both scientific and response management areas; and training for all responders in state-of-the-art response techniques and emerging chemical, biological, and radiological threats.

EPA's Environmental Response Team (ERT) will continue to provide specialized field support to Regional responders, including specialized air monitoring, health and safety support, and other scientific and technical support. ERT will continue to enhance its capabilities in its Edison, New Jersey, Cincinnati, Ohio, and Las Vegas, Nevada, locations to ensure that they are ready at all times to quickly and effectively meet the specialized field support needs of EPA's responders, including those responses to terrorist incidents with biological, chemical, and radiological agents.

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EPA will continue the development of the National Response Decontamination Team (Decon Team) that provides unique, immediate response capabilities to safely and effectively support decontamination activities related to chemical, biological, and radiological terrorism events. While focused domestically, the Decon Team may respond worldwide delivering scientific and engineering expertise for the decontamination of buildings, building contents, public infrastructure, indoor environments and the associated environmental media. The primary function of the Decon Team is to support EPA OSCs conducting or overseeing response activities under the authorities of the National Contingency Plan (NCP) at the scene of the aftermath of a weapon of mass destruction (WMD) event. The Decon Team is designed to integrate with and operate from within incident command structures, along with and complementing other Special Forces. When not fully engaged, this team is devoted to preparedness activities related to the team's primary function.

EPA's capability to respond effectively to chemical, biological, and radiological incidents will be measured through the Core Emergency Response (Core ER) program. This continued enhancement in EPA's Regional response capabilities will cover all aspects of the Core ER program, including Regional Response Centers, transportation, coordination with backup Regions, health and safety, delegation and warrant authorities, response readiness, response equipment, identification clothing, training and exercises, and outreach. The Agency has established measurable improvement goals in Core ER and will work toward that improvement through exercises and other program enhancements.

EPA has established criteria of excellence through the structure of the Core ER program. While EPA is currently prepared to respond to chemical, biological, and radiological incidents, improvement in the emergency response and homeland security readiness measure will demonstrate an increased ability to respond quickly and effectively to national-scale events. The FY 2006 Core ER target is to improve emergency response and homeland security readiness by 10% per year from the FY 2003 baseline performance.

#### ***F.A.2. OVERVIEW OF FY 08/09 REMOVAL ACTIONS TARGETS/MEASURES***

The Superfund Comprehensive Accomplishments Plan (SCAP) is used by the Assistant Administrator for the Office of Solid Waste and Emergency Response (AA OSWER), Assistant Administrator for the Office of Enforcement and Compliance Assurance (AA OECA), and senior Superfund managers to monitor progress each region is making towards achieving the Government Performance and Results Act (GPRA) annual performance goals. In addition, SCAP will continue to be used as an internal management tool to project and track activities that contribute to these GPRA goals and support resource allocation. The program will set national goals based on historical performance and performance expectations within a limited budget for the performance goals in GPRA and track accomplishments in the activities contributing to those goals. Regions should continue to plan and report accomplishments in CERCLIS as they have traditionally.

To more clearly reflect the relationship between GPRA and the SCAP process, GPRA annual performance goals and measures and program targets and measures are defined as follows:

- **GPRA Annual Performance Goals (APG) and GPRA Annual Performance Measures (APM)** - The Agency's Annual Plan describes the specific annual performance goals, annual measures of outputs and outcomes, and activities aimed at achieving the performance goals that will be carried out during the year. APGs are the specific activities that the Agency plans to conduct during the fiscal year in an effort towards achieving its long-term strategic goals and objectives. APMs are used by managers to determine how well a program or activity is doing in achieving milestones that have been set for the year. The annual performance goals will inform Congress and Agency stakeholders of the expected level of achievement for the significant activities covered by the GPRA objective. The goals are a subset of the overall planning and budgeting information that has traditionally been tracked by the Superfund program offices.
- **Program Targets and Measures** are activities deemed essential to tracking overall program progress. Program targets are used to identify and track the number of actions that each region is expected to perform during the year and to evaluate program progress. Program measures are used to show progress made in achieving program priorities.

The following pages contain the definitions of the FY 08/09 removal activities, GPRA annual performance goals, GPRA and program measures, and removal project support activities. Exhibit F.1 displays the full list of removal

and activities defined in this Appendix. Exhibit F.2, at the end of this Appendix lists the subject matter experts for each relevant subject area.

**EXHIBIT F.1  
REMOVAL ACTION ACTIVITIES**

ACTIVITY	GPRA		PROGRAM	
	APG	APM	Target	Measure
Removal Starts				T
Removal Completions	T	T		

**a. REMOVAL STARTS**

**Definition:**

Removal actions are responses performed at NPL and non-NPL sites that eliminate or reduce threats to public health or the environment from the release, or potential release, of hazardous substances or pollutants or contaminants which may pose an imminent and substantial danger to public health or welfare. These risk reduction activities can be conducted as emergency, time-critical, or NTC removal actions. This measure tracks each removal action. The appropriate use of Special Account funds for removal actions is provided in the AGuidance on Key Decision Points in Using Special Account Funds<sup>o</sup> dated September 28, 2001.

**Definition of Accomplishment:**

A site is addressed by a removal action when the EPA, Response Action Contract (RAC), Emergency and Rapid Response Services (ERRS), State, or PRP, or their contractors, have mobilized for construction of the removal action specified in the Action Memorandum.

- **Fund-financed (Including F-, TR-, or S-lead) actions** - EPA, State or their contractors have begun work at a site for construction of the removal (emergency, time-critical, or non-time critical) as documented by a Pollution Report (POLREP). The date of on-site construction is reported in CERCLIS as the removal (Action Name = Removal Action) actual start date (Actual Start).
- **PRP-financed from a Special Account (Including Special Account Financed Action performed by EPA (SA-lead), the State (SS-Lead), or Tribal Government (ST-lead) actions<sup>1</sup>)** - EPA, State, tribal government or their contractors have begun work at a site for construction of the PRP-financed removal (emergency, time-critical, or non-time critical) as documented by a Pollution Report (POLREP). The date of on-site construction is reported in CERCLIS as the removal (Action Name = Removal Action) actual start date (Actual Start).
- **PRP-financed (Including RP- and MR- lead) actions under the terms of an AOC, UAO, CD, or judgment** - The PRPs or their contractors have begun work on-site for construction of the removal (emergency, time critical, or non-time critical) as documented in a POLREP AND the PRPs provide written notice of intent to comply with a UAO, or an enforcement instrument has been signed by EPA and the PRPs, or a judgment has been signed by a Federal judge.

The date of on-site construction is reported in CERCLIS as the removal (Action Name = PRP Removal) actual start date (Actual Start). The following information must be entered into CERCLIS for the enforcement instrument:

- The date the AOC (Action Name = Admin Order on Consent) was signed by the PRPs and the

<sup>1</sup> Actions qualify for SA, SS, and ST leads, when the majority of the funding for the total estimated response cost (including direct and indirect costs) is to be paid from a Special Account. The amount contributed from a Special Account should meet or exceed the amount contributed by the largest non-PRP entity (i.e., EPA, State where applicable) toward the total estimated response cost at the site. For example for a removal action, if 60% of the funds needed to finance the estimated response are to be derived from a Special Account and 40% of the response costs will be paid out of Fund monies (or a lesser amount if State cost share is received), the majority of the response cost is being paid for out of a Special Account and the action qualifies for a SA, SS, or ST lead.

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- designated Regional official (Actual Complete), and the Response Acts Pd by Parties of PRP Removal; or
- The date (Actual Complete) the PRPs provide notice of intent to comply (Action Name = PRP Notify EPA of Intent to Comply) with a UAO for a RP-lead removal signed (Actual Complete) by the designated Regional official (Action Name = Unilateral Admin Order), and the Response Acts Pd by Parties of PRP Removal; or
  - The date the Regional Administrator signs the memorandum transmitting the CD (Action Name = Consent Decree) to DOJ or HQ and the Response Acts Pd by Parties of PRP Removal; or
  - The date a judgment (Action Name = Judicial/Civil Judgment) was signed by the Federal judge (Actual Complete), and the Response Acts Pd by Parties of PRP Removal.
- ***PRP-financed (PS-lead actions) under terms of a State Order or decree*** - The PRPs or their contractors have begun work on-site for construction of the removal (emergency, time critical, or non-time critical) as documented in a Pollution Report (POLREP) and the State enforcement instrument has been signed by the appropriate State official.
  - ***PRP-Lead (RP-lead actions) Emergency Removals Without an Enforceable Instrument*** - The PRP or their contractors have begun construction work on-site in response to an emergency incident and EPA provides on-site technical oversight and/or is part of an incident command system/unified command (as documented in a POLREP). The date of construction is reported in CERCLIS as the removal (Action Name = PRP Emergency Removal), actual start date (Actual Start).
  - ***PRP-Lead (RP-lead actions) Time Critical and Non-Time Critical Removals Without an Enforceable Instrument*** - The PRP or their contractors have begun construction work on-site in response to a time critical or non-time critical removal and EPA provides on-site technical oversight and/or is part of an incident command system/unified command (as documented in a POLREP). The date of construction is reported in National CERCLIS as the removal (Action Name = PRP Removal), actual start date (Actual Start).
  - ***For both Fund- and PRP-financed removals***, the following additional information must be entered into CERCLIS:
    - The Critical Indicator classification of the removal [(1) Emergency, (2) Time Critical, and (3) Non-Time Critical];
    - The media addressed through the removal (Media Type);
    - The Media Name;
    - The Response Action being conducted (Selected Response Actions);
    - The response action cost data;
    - The Institutional Control information; and
    - The five year review information (at NPL sites only).

An endangerment determination should be documented when an Action Memo or Removal Action Decision Document or an enforcement instrument is prepared. Regions identify which of the documents contain the endangerment determination when they enter the actual completion date (Actual Complete) for the corresponding action into CERCLIS.

**Changes in Definition FY 06/07 - FY 08/09:**

None.

**Planning/Reporting Requirements:**

Program policy remains enforcement first. Headquarters encourages the Regions, in order to be able to bill for oversight costs, to use enforceable instruments for PRP-Lead time critical and non-time critical removals.

Fund-financed removals, PRP-financed removals under the terms of an enforceable instrument, PRP-financed emergency removals without an enforceable instrument and PRP-financed time critical and non-time critical removals without an enforceable instrument will be tracked separately for management purposes. Removals are covered under the



removal AOA. Emergency Responses (PRP-lead emergency removals without an enforceable instrument) and PRP-lead time critical and non-time critical removal starts without an enforceable instrument are program measures. When adding a PRP-financed time critical or non-time critical removal without an enforceable instrument use the PRP Removal action only. Removal start totals will not include Coast Guard leads. Coast Guard lead removals are recorded non-site-specifically in CERCLIS through the program management screen.

## **b. REMOVAL COMPLETIONS**

### **Definition:**

Removal actions are responses performed at NPL or non-NPL sites that eliminate or reduce threats to public health or the environment from the release, or potential release, of hazardous substances or pollutants or contaminants which may present an imminent and substantial danger to public health or welfare. These risk reduction activities can be conducted as emergency, time-critical or NTC removal actions. This measure tracks each removal completion at a site.

**DISCLAIMER:** Regions will receive credit in the management of the Superfund program for a completion of a removal action even though the removal action itself may not be complete for cost recovery statute of limitations purposes. Agency policy for statute of limitations purposes provides that a removal is not complete until EPA has made a final decision on whether any additional cleanup activity is required (and, if it is required, until EPA has both made a final decision on such additional activity and has completed the design for that activity). The date found in the removal action, actual complete column of a CERCLIS report is a programmatic measure only, and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. EPA reserves the right to change such data at any time without public notice.

### **Definition of Accomplishment:**

Following are the conditions under which a removal is considered complete:

- A Fund-financed removal is considered complete when the actions specified in the Action Memorandum are met, OR when the contractor has demobilized and left the site (as documented in the POLREP) and recorded as the removal (Action Name = Removal Action) actual completion date (Actual Complete) in CERCLIS.
- A PRP-financed removal performed by the PRP under the terms of a Federal enforcement instrument, is considered complete when the Region has certified that the PRPs have fully met the terms of an AOC, UAO, CD, or judgment and have completed the actions specified in the Action Memorandum (as documented in the POLREP) and recorded as the removal (Action Name = PRP Removal) actual completion date (Actual Complete) in CERCLIS.
- A PRP-financed removal performed by the PRPs under the terms of a State enforcement document is considered complete when the State has certified the PRPs have fully met the terms of the instrument AND have completed the actions specified in the Action Memorandum (as documented in the POLREP) and recorded as the removal (Action Name = PRP Removal) actual completion date (Actual Complete) in CERCLIS.
- A PRP-financed emergency removal action without an enforceable instrument is considered complete when the OSC, in consultation with the unified command/incident command system if applicable, has determined that the emergency is stabilized (as documented in a POLREP) and recorded as the removal (Action Name = PRP Emergency Removal) actual completion date (Actual Complete) in CERCLIS.
- PRP-financed time critical and non-time critical removal actions without enforceable instruments are considered complete when the OSC, in consultation with the unified command/incident command system if applicable, has determined that the time critical or non-time critical removal is stabilized (as documented in a POLREP) and recorded as the removal (Action Name = PRP Removal) actual completion date (Actual Complete) in National CERCLIS.

In order to receive credit for a removal completion an endangerment determination must be performed. This endangerment determination may be documented in an Action Memo, Removal Action Decision Document or enforcement instrument. Regions identify which of these documents contain the endangerment determination by entering the actual completion date (Actual Complete) into CERCLIS.

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For either Fund- or PRP-financed removals, an action qualifier (Qualifier) must be recorded to identify whether the action resulted in the site being A Cleaned Up@ or A Stabilized.@

Action qualifiers are defined as follows:

- Cleaned Up: All threats have been addressed as defined in the Action Memo and the region determines that it has addressed all threats posed by the site (will not be returning for subsequent response activity). Also, all removal obligations and related work have been completed.
- Stabilized: All threats identified in the Action Memo have been addressed. The region may take additional removal actions as new threats are identified/investigatory information is available. Example: Leaking drums and contaminated soil in the area of the drums are excavated and disposed of in an approved off-site facility. Site is stabilized.

Exceptions:

Temporary demobilization and temporary storage on-site are not considered completions, unless temporary storage is the only action specified in the Action Memorandum to mitigate threats to public health, welfare, and the environment. Likewise, temporary off-site storage of hazardous substances at a Treatment, Storage, and Disposal (TSD) facility other than the facility of ultimate disposal is a continuation of the action, not a completion, unless temporary off-site storage at a TSD is the only action specified in the Action Memorandum. In addition, a removal would not be considered complete if:

- The Action Memorandum requires the EPA contractor to monitor the hazardous substances stored on-site or additional contractor expenditures are anticipated; or
- Hazardous substances are being stored at an off-site facility, other than the ultimate TSD facility required in the Action Memorandum.

A removal would be considered complete if:

- The scope of work for the action does not specify final off-site disposal of hazardous substances; the substances have been stabilized and are stored on-site due to circumstances such as the unavailability of a final treatment/disposal remedy; and no additional Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) removal authority funds are anticipated to be expended on this action. In this instance, no CERCLA removal authority funds will be expended for remedial-term site O&M. Any remedial-term site O&M (greater than 6 months) should be performed by the PRP or another agency (e.g., the State); or
- Hazardous substances are being stored off-site at the location of final disposal, and no additional contractor expenditures are anticipated for this action.

#### **Changes in Definition FY 06/07 - FY 08/09:**

None.

#### **Special Planning/Reporting Requirements:**

Upon completion of a removal, an action Qualifier must be recorded to identify whether the removal resulted in the site being 'Cleaned Up' or 'Stabilized.' This is a both a GPRA annual performance goal and GPRA measure. Removal completion totals will not include Coast Guard leads. Coast Guard lead removals are recorded non-site-specifically in CERCLIS through the program management screen.

### ***F.B SUBJECT MATTER EXPERTS***

The following exhibit identifies the subject matter experts for Appendix F: Removals.

OSWER Directive 9200.3-14-1G-S

**EXHIBIT F.2**  
**SUBJECT MATTER EXPERTS**

<b>Subject Matter Expert</b>	<b>Subject Area</b>	<b>Phone #</b>	<b>Email</b>
<b><u>Josh Woodyard</u></b>	<u>OEM Strategic Planning/</u> <u>Reporting</u>	<u>202-566-0738</u>	<u>woodyard.joshua@epa.gov</u>
<b>Charlotte Englert</b>	Removal Financial	202-564-8888	<u>englert.charlotte@epa.gov</u>
<b>Lisa Guarneiri</b>	Removal Financial	202-564-8601	<u>guarneiri.lisa@epa.gov</u>
<b>Shawn Moreland</b>	Removal Financial	202-564-8888	<u>moreland.shawn@epa.gov</u>
<b>Dana Stalcup</b>	Removal Financial	202-564-2089	<u>stalcup.dana@epa.gov</u>
<b>Bill Finan</b>	Removal Implementation	202-564-7981	<u>finan.bill@epa.gov</u>
<b>Armando Santiago</b>	Removal Implementation	202-564-8002	<u>santiago.armando@epa.gov</u>

OSWER Directive 9200.3-14-1G-S

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# EXHIBIT F

99202

**FEDERAL ON-SCENE COORDINATOR'S REPORT  
FOR  
Boarhead Farms NPL Site  
Upper Black Eddy, Bucks County, Pennsylvania  
June 18, 1992 to September 17, 1993**



**UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
PHILADELPHIA, PENNSYLVANIA**

AR400013

**Federal On-Scene Coordinator's Report  
Boarhead Farms NPL Site**

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REGION III  
CERCLA REMOVAL ACTION

PROJECT #296  
FACT SHEET (PAGE 1 OF 2)

**SITE:** Boarhead Farms NPL Site - U. S. EPA ID No. PAD980830780

**SIZE:** 113+ Acres.

**LOCATION:** 1310 Lonely Cottage Road, Upper Black Eddy, Bucks County, Pennsylvania, 18972.

**APPROVAL DATE:** February 26, 1992

**PROJECT DATES:** June 18, 1992 to September 17, 1993

**DESCRIPTION:** The Boarhead Farms Site was a 113 acre, partially wooded lot which was owned by the Boarhead Corporation, a chemical transporter. The property was used as a truck depot and a drum burial grounds between 1969 and 1989. The Site was placed on the NPL in 1989 and a subsequent magnetometer survey yielded 28 magnetic anomalies of sufficient strength and size to encourage the EPA RPM to request Removal assistance. The EPA Removal branch performed an additional magnetometer survey in June, 1992, and began a Removal action based on this, and confidential informant information, on June 29, 1992. Test trenching operations revealed buried drums of hazardous materials on 6/30/92. Over 2,250 drums were excavated from the Site by the end of the project.

**HAZARDOUS MATERIALS:** Organics - acetone, benzene, carbon tetrachloride, cyanide, methyl ethyl ketone, tetrachloroethane, trichloroethane, trichloroethylene, toluene, xylene. Metals - arsenic, beryllium, cadmium, chromium, lead, mercury, selenium. RCRA characteristic wastes - flammables, corrosives, poisons, oxidizers. Radioactive materials - thorium.

**QUANTITIES REMOVED:** 54,776 gallons of drummed liquid waste  
9,800 pounds of drummed solid waste  
75 responsible party drums  
3 responsible party (radioactive) drums  
11 lab pack drums  
58 drums of sample jars  
8,429.47 tons of soil-  
44 tandem trailers of RP soil  
260 cubic yards of crushed empty drums  
4,016 gallons of tankered pit wastewater  
80 mL of a controlled substance  
1 pound of explosives (ammonia geletan dynamite)  
80 cubic yards of potentially contaminated poly soil pile covers  
75 cubic yards of PPE



**REGION III  
CERCLA REMOVAL ACTION****PROJECT #296  
FACT SHEET (PAGE 2 OF 2)**

**OSC:** Dennis Matlock and Terry Stilman.

**REMOVAL CONTRACTOR:** Environmental Technologies, Inc., Richmond, Virginia

**DISPOSAL LOCATIONS:**

- 1) Chemical Conservation of Georgia, Valdosta, Georgia
- 2) Chemical Conservation Corporation, Orlando, Florida
- 3) Northeast Environmental Services, Inc., Wampsville, New York
- 4) Ensco, Inc., El Dorado, Arizona
- 5) Clean Harbors of Baltimore, Baltimore, Maryland
- 6) Michigan Disposal, Inc., Belleville, Michigan
- 7) Wayne Disposal, Inc., Belleville, Michigan
- 8) Laidlaw Environmental Services (TS), Inc., Laurel, Maryland
- 9) G.R.O.W.S., Inc., Morrisville, Pennsylvania
- 10) Athens Hocking Reclamation Center, Nelsonville, Ohio
- 11) RSO, Inc., Laurel, Maryland
- 12) Chem-Met Services, Wyandotte, Michigan
- 13) Envirosafe Services of Ohio, Inc., Oregon, Ohio
- 14) ThermalKEM, Inc., Rock Hill, South Carolina

**PROJECT CEILING:** \$8,173,000

**PROJECT COSTS:** \$4,280,150 (estimated)

**COMMENTS:** Removal actions mitigated the threat to the public and the environment caused by the release and the potential for additional release of hazardous substances located at the Site. Cooperation between the Removal Branch and the Remedial Branch was vital in the successful and cost efficient execution of this action. This cooperation resulted in the expedient and thorough mitigation of the threat to human health and the environment posed by this Site. In addition, close contact with local residents and officials contributed to an informed and positive atmosphere around the Site and provided information which aided in the expediency of the Removal action.

  
Dennis Matlock, OSC

**Boarhead Farms NPL Site  
Federal On-Scene Coordinator's Report**

**FOREWORD**

The On-Scene Coordinator (OSC), as mandated by the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300 (NCP 1990), is required to provide a coordinated federal response capability at the scene of an unplanned or sudden discharge of oil or hazardous substance that poses a threat to the public health or the environment. In addition, the provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), promote a coordinated federal, state and local response to mitigate situations at hazardous waste sites that pose an imminent and substantial threat to public health and/or the environment.

The Boarhead Farms NPL Buried Drum Site presented an imminent and substantial risk of harm to human health and the environment due to the uncontrolled release of a hazardous substance to the environment, thereby providing a legal basis for federal response activities. The provisions of the NCP, Section 300.415, were implemented by the U.S. Environmental Protection Agency, Region III, Philadelphia, Pennsylvania.

The OSC would like to extend thanks to all of the agencies and individuals who provided valuable assistance and expertise to ensure the successful completion of this cleanup effort.



Dennis Matlock  
On-Scene Coordinator  
U.S. EPA Region III  
Philadelphia, Pennsylvania.

**Boarhead Farms NPL Site  
Federal On-Scene Coordinator's Report  
Page 1**

## **I. INTRODUCTION**

### **A. Initial Situation**

The Boarhead Farms Site, Upper Black Eddy, Bucks County, PA., was purchased by the Boarhead Corporation in 1969. Boarhead Corporation and DeRewal Chemical Company (DCC) were subsequently incorporated by the president and sole share-holder of both companies, Mr. Manfred DeRewal. DCC, a chemical transport company, established its office at the Boarhead Site in 1969.

Mr. DeRewal was the president of Echo, Inc., prior to establishing Boarhead Corporation and operated the Revere Chemical Site in Revere, Bucks County, Pennsylvania, from 1965 to 1969. The Revere Site was ordered closed in 1970 by the Pennsylvania Department of Environmental Resources (PADER) because of its threat to the environment and numerous pollution violations. During legal proceedings related to the Revere Site, Mr. DeRewal claimed that he moved 260,000 gallons of liquid waste from Revere between July 17, 1970, and August 4, 1970. Mr. DeRewal was unable to produce any documentation regarding the disposal of this liquid waste. The Revere Chemical Site is located approximately four miles from the Boarhead Farms Site.

Between February 20, 1973, and July 30, 1976, the Bucks County Department of Health (BCDOH) filed in excess of fifteen Waste Discharge Inspection Reports regarding the Boarhead Farms Site. These reports cited several fish kills, incidents of improperly stored chemicals, releases of liquid chemicals in excess of 4,000 gallons on several occasions, sewage sludge dumping in excess of 6,000 pounds, and several violations of the Pennsylvania Clean Streams Law. Of particular significance is the documentation of drum burial being conducted on site in the Waste Discharge Inspection Report of February 20, 1973.

On March 29, 1976, Mr. DeRewal and the Boarhead Corporation were found guilty of nine separate violations of the Pennsylvania Clean Streams Law. On September 8, 1976, 34 people were evacuated from the area surrounding the Boarhead Farms site because of a sulfuric acid cloud released from a leaking tanker parked on the Boarhead property.

Documentation from the Waste Discharge Inspection Reports and Pennsylvania Department of Transportation interviews with Mr. DeRewal identified many of the substances stored and/or spilled on the site. These substances included copper ammonium sulfate, paint solvents, arsenic pentoside, pesticides, copper naphthalate, ferrous chloride, copper ammonium carbonate, liquid ammonia, hydrochloric acid, sulfuric acid, copper ammonium chloride, gold cyanide, silver cyanide, arsenic, cyanide, calcium hydroxide, sodium chloride, sodium sulfate, unspecified solvents, unknown acids, and other unknown liquid wastes. Many of these compounds are considered to be hazardous substances pursuant to Section 101(14) of CERCLA, 42 U.S.C. Section 9601(14).

As a result of information obtained during a Remedial Investigation/Feasibility Study (RI/FS), the U.S. EPA Remedial Branch requested EPA Removal Branch assistance in the investigation of buried drums at the site. OSC Matlock responded to this request in December of 1991. Access disputes with the property owner delayed Removal Activities onsite until June of 1992.

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**Boarhead Farms NPL Site  
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**B. Site Location**

The Boarhead Farms NPL Site is located at 1310 Lonely Cottage Road in Upper Black Eddy, Bridgeton Township, Bucks County, Pennsylvania. The surrounding area is primarily rural, with approximately 50 residences located within one mile of the Site. Three portions of State Game Lands Number 56 are located within one mile of the Site and one portion borders the Site on the western side. Surrounding public buildings include a sportsman's club located directly adjacent to the southern edge of the Site along Lonely Cottage Road and an elementary school located on Bridgeton Hill Road approximately one mile from the Site. Runoff from the Site flows primarily to the south-southeast and secondarily to the northeast. All of the runoff from the Site flows into an unnamed tributary to the Delaware River. This tributary flows into the Delaware River two miles downstream.

**C. Efforts to Obtain Cleanup from Potentially Responsible Party**

Attempts to obtain clean-up from Boarhead Corporation, DeRewal Chemical Company, Manfred DeRewal, Sr., or any of Mr. DeRewal's children were entirely unsuccessful. Boarhead Corporation and DeRewal Chemical Company are defunct, Mr. DeRewal was in jail for unrelated federal offenses at the on-set of the project, and Mr. DeRewal's children did not possess the means to fund a clean-up. During operations, the OSC made several attempts to obtain information on other PRPs from Mr. DeRewal while he was incarcerated.

During operations, a large number of company names were obtained from excavated labels and containers. All of this information was forwarded to the PRP Search Section of the Region III EPA. One company, General Ceramics, National Beryllia Division, was contacted by the OSC during excavations of pit "W". A large portion of the material excavated from pit "W" was identified as General Ceramics material. General Ceramics, responded to a 104 (e) letter issued by the Region III EPA and subsequently sent a representative to the Site to inspect the material. General Ceramics, confirmed that much of the material excavated from pit "W" was indeed its material. General Ceramics, National Beryllia Division subsequently arranged for the transportation and disposal of 72 drums of hazardous waste, 3 drums of radioactive material, and approximately 880 cubic yards of contaminated soil.

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## II. ROSTER OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS

### A. Names and Addresses

AGENCY	CONTACT NAME	BRIEF DESCRIPTION OF DUTIES
<b>FEDERAL</b>		
U.S. EPA Region III CERCLA Removal Section 841 Chestnut Building Philadelphia, PA (215) 597-9800	Dennis Matlock, OSC  Terry Stilman, OSC	Coordinated site activities to the successful completion of the project.
U.S. EPA Region III CERCLA Removal Section 841 Chestnut Building Philadelphia, PA (215) 597-9800	Joanna McDonald, FAS  Rich Messimer, SAO  Linda Marzulli, SAO	Assisted the OSC with cost tracking and administrative duties.
U.S. EPA Region III CERCLA Office of Public Affairs 841 Chestnut Building Philadelphia, PA (215) 597-9800	David Sternberg, OPA	Responded to inquiries from the media and public interest groups.
U.S. EPA Region III CERCLA Office of Regional Counsel 841 Chestnut Building Philadelphia, PA (215) 597-9800	Brian Nishitani, ORC	Coordinated legal issues such as access between the OSC and the property owner.
U.S. EPA Region III CERCLA Remedial Section 841 Chestnut Building Philadelphia, PA (215) 597-9800	Lisa Nichols, RPM  Harry Harbold, RPM  Jack Kelly, RPM	Assisted the OSC in coordinating site activities with regard to Remedial Branch goals. Coordinated Remedial activities on-site.
U.S. EPA Region III Biological Technical Assistance Group 841 Chestnut Street Philadelphia, PA (215) 597-9800	Peter Stokely, Wetlands Specialist	Assisted the OSC with wetlands and wildlife issues.
U.S. Department of the Interior, Geological Survey Water Resources Division 111 Great Valley Parkway Malvern, PA 19355 (215) 647-9008	Curtis L. Schreffler, Hydrogeologist  Ronald A. Sloto, Chief, Hydrological Studies Section	Provided the OSC with information regarding hydrology of the site and the areas surrounding the site.

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AGENCY	CONTACT NAME	BRIEF DESCRIPTION OF DUTIES
U.S. Department of the Interior, Geological Survey Water Resources Division 840 Market Street Lemoyne, PA 17043 (717) 730-6947	Randall W. Conger Geophysics Specialist	Provided the OSC with information regarding hydrology of the site and the areas surrounding the site.
STATE AND LOCAL		
Pennsylvania Department of Environmental Resources (PADER) Hazardous Sites Cleanup Program Suite 6010 Lee Park 555 North Lane Conshohocken, PA 19428 (215) 832-6198	Belinda May, PO  Bruce McClain, Hydrogeologist  Tim Sheehan, Operation Supervisor  Irwin N. Lourie, Chemist	Assisted the OSC with State ARARs and permits in regards to such issues as pond water discharge. Provided fish sampling and analysis support.
Pennsylvania Department of Environmental Resources (PADER) Hazardous Sites Cleanup Program P.O.Box 2063 Fulton Building Harrisburg, PA 17120 (215) 832-6198	J. Thomas Leaver, Hydrogeologist	Assisted the OSC with State ARARs and permits in regards to such issues as pond water discharge. Provided fish sampling and analysis support.
Bucks County Conservation District 924 Town Center New Britain, PA 18901 (215) 345-7577	John Thomas, CESC, District Manager	Assisted the OSC with Pond Water Discharge Issues and Drainage Managements Issues.

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AGENCY	CONTACT NAME	BRIEF DESCRIPTION OF DUTIES
County of Bucks Emergency Management Agency 50 North Main Street Doylestown, PA 18901 (215) 348-7518	John D. Dougherty, Jr., EMA Coordinator  Peter G. Noll, Environmental Protection Specialist  Mark Showmaker, H.I.R.T. Coordinator  Lee W. Thomas, P.E., Director, Bureau of Environmental Health  Peter D. Ference, EMA Specialist  Harford P. Drexler, EMA Executive	Assisted the OSC in developing and coordinating an emergency contingency plan for Bridgeton and Nockamixon Townships and provided background information regarding the site history.
Pennsylvania Game Commission Southeast Region R.D. 2, Box 2584 Reading, PA 19605 (215) 926-3136	Douglas M. Kilough, Federal Aid Supervisor	Assisted the OSC in regard to wildlife issues.
Pennsylvania Game Commission Southeast Region P.O. Box 872 Trumbauersville, PA 18970 (215) 926-3136 1-800-228-0791 (215) 926-3136	C. A. Trewella, Wildlife Conservation Officer	Assisted the OSC in regard to wildlife issues.
Bridgeton Township Supervisor Friendship Lane Upper Black Eddy, PA 18972 (215) 982-5255	Barbara Guth, Chair	Assisted the OSC with community relations, distributed weekly reports to local residents, provided the OSCs with local emergency contacts, and assisted in organizing public meetings.
CONTRACTORS		
Roy F. Weston, Inc. Technical Assistance Team 5 Underwood Court Delran, NJ 08075 (609) 461-4003	Robert McGlade, Environmental Biologist  Arthur W. Saunders, Biologist  Micheal J. Morgan, Hydrogeologist  Robert Burner, RSO	Assisted the OSC with all technical aspects of the project, site safety, cost tracking, contractor monitoring, and formal reports.

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AGENCY	CONTACT NAME	BRIEF DESCRIPTION OF DUTIES
Environmental Technologies of North America, Inc. Emergency Response Clean-up Services (ERCS) contractor 3705 Saunders Ave. Richmond, VA 23227 (804) 358-5400	Craig Hill, RM  Clay Mullican, RM	Responsible for the coordination of manpower and equipment to mitigate the threat at the site.
Petro-Clean, Inc.	Paul Tran, Chemist	Coordinated sampling and disposal of hazardous waste.
AATAC Security P.O.Box 339 Levittown, PA 19058 (215) 547-3877	Paul C. Filoon, President	Provided 24-hour site security during the removal action, 6/30/92 through 9/15/92.
Assets Protection, Inc.		Provided 24-hour site security during the removal action, 9/15/92 through end.
CH2M Hill 1216 Arch Street Philadelphia, PA 19107 (215) 563-4220	Donna Sexton Connery, Hydrogeologist	Assisted the OSC by providing background information and analytical. Responsible for the coordination of manpower and equipment for remedial activities.
CH2M Hill 310 W. Wisconsin Ave. Suite 700 P.O. Box 2090 Milwaukee, WI 53201 (414) 272-2426	Donald W. Johnson, Geophysicist	Assisted the OSC with the initial location of magnetic anomalies on-site. Provided the OSC with a detailed map of the remedial branch magnetic survey.
DISPOSAL CONTRACTORS		
Chemical Conservation of Georgia 1612 James P. Rodgers Circle Valdosta, GA 31601 (912) 244-0474 EPA ID#GAD093380814		Provided disposal for drums in waste groups 1 through 14 and 24 through 44.
Chemical Conservation Corporation 653 Rocket Boulevard Orlando, FL 32824 (407) 859-4441 EPA ID#FLD980559728		Provided disposal for drums in waste groups 1 through 14 and 24 through 44.

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AGENCY	CONTACT NAME	BRIEF DESCRIPTION OF DUTIES
Northeast Environmental Services, Inc. Canal Road Wampsville, NY 13163 (315) 697-3979 EPA ID#NYD057770109		Provided disposal for drums in waste groups 15 through 23.
ENSCO, Inc. American Road El Dorado, AR 71730 (501) 863-7173 EPA ID#ARD069748192		Provided disposal for lab pack drums.
Clean Harbors of Baltimore 1910 Russell Street Baltimore, MD 21230 (301) 685-3910 EPA ID#MDD980555189		Provided disposal for tankard water from pit "K".
Michigan Disposal, Inc. 49350 North I-95 Service Drive Belleville, MI 48111 (313) 697-7830 EPA ID#MID000724831		Provided disposal for soils requiring treatment and landfilling.
Wayne Disposal, Inc. 49350 North I-95 Service Drive Belleville, MI 48111 (313) 697-7830 EPA ID#MID048090633		Provided disposal for hazardous soils requiring direct landfill.
Laidlaw Environmental Services (TS), Inc. 3527 Whiskey Bottom Road Laurel, MD 20724 (301) 953-9583 EPA ID#980554653		Provided disposal for poly soil pile covers, used PPE, crushed empty drums, and RP (General Ceramics).
G.R.O.W.S., Inc. 1000 Newford Mill Road Bordentown and Newford Mill Road Morrisville, PA 19067 (215) 736-9475 EPA ID#PAD000429589		Provided disposal for direct landfill, non-hazardous soil.
Athens Hocking Reclamation Center US Route 33 Nelsonville, OH 45764 (614) 385-6019 ID#05-00-06		Provided disposal for RP General Ceramics.

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AGENCY	CONTACT NAME	BRIEF DESCRIPTION OF DUTIES
Envirosafe Services of Ohio, Inc. 876 Otter Creek Road Oregon, OH 43616-7571 (419)255-5100 EPA ID#OHD045243706		Provided disposal for crushed empty drums and PPE shipped on 9/16/93.
RSO, Inc. P.O Box 1526/711 Gorman Avenue Laurel, MD, 20725-1526 (301)792-7444 EPA ID#MDD069279669 RAM License Number MD3302102		Provided disposal of radioactive waste for RP General Ceramics.
Chem-Met Services, Inc. 18550 Allen Road Wyandotte, MI 48192 (313) 282-9250 EPA ID#MID096963194		Provided disposal for drum groups 49 through 62.
Envirosafe Services of Ohio, Inc. 876 Otter Creek Road Oregon, OH 43616-7571 (419) 255-5100 USEPA ID#OHD045243706		Provided disposal of crushed empty drums/PPE shipped on 9/16/93
ThermalKEM, Inc. 454 South Anderson Road BTC 532 Rock Hill, SC 29730 (803) 329-9690 USEPA ID#SCD044442333		Provided disposal of lab pack drums #7 through 11.
TRANSPORTATION CONTRACTORS		
J.B. Hunt Specialty Commuting, Inc. 1-800-368-8539 EPA ID#ARD981908551		Provided transportation for drums in groups 1 through 14.
Northeast Environmental Services, Inc. Canal Road Wampsville, NY 13163 (315) 697-3979 EPA ID#NYD057770109		Provided transportation for drums in groups 15 through 23.
Horwith Trucks, Inc. P.O. Box 7 North Hampton, PA 18067 (215) 261-2220 EPA ID#PAD064035819		Provided transportation for drums in waste groups 23 through 44 and 49 through 62, non-hazardous soil, and RP General Ceramics pit "W" soil.

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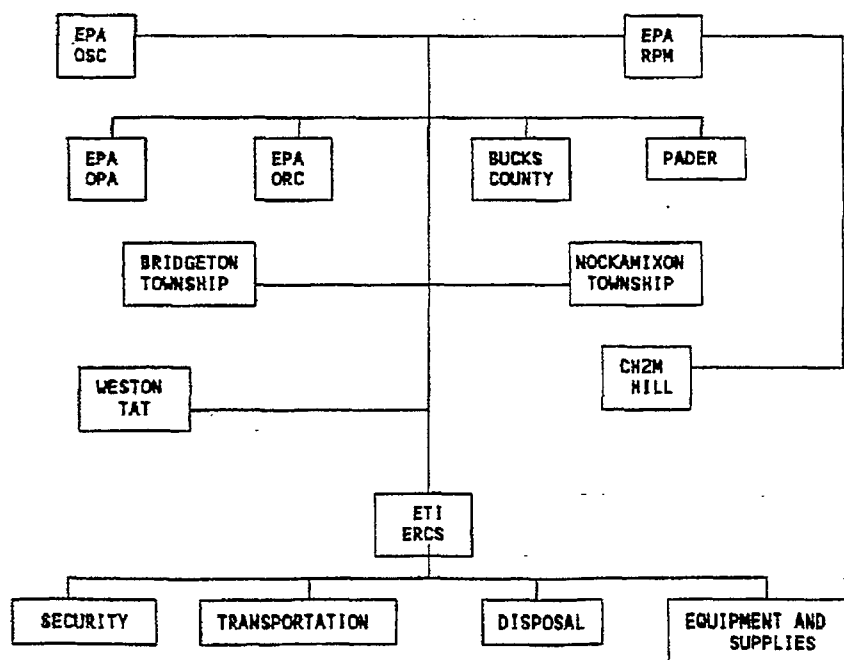
AGENCY	CONTACT NAME	BRIEF DESCRIPTION OF DUTIES
Division Transport (501) 863-7173 EPA ID#ARD069748192		Provided transportation for lab pack drums.
Clean Harbors of Kingston 1200 Crown Colony Road Quiney, MA 02269-9137 (617) 849-1800 EPA ID#MAD039322250		Provided transportation for tankard pit "K" wastewater.
Republic Environmental Systems (Transportation Group) 21 Church Road Hatfield, PA 19440 (215) 997-9111 EPA ID#PAD982661381	Kevin John	Provided transportation for hazardous soil requiring treatment and/or landfill.
Laidlaw Environmental Services (TG), Inc. (803) 587-1999 EPA ID#SCD987574647		Provided transportation for poly soil pile covers, PPE, and crushed empty drums.
Eldredge, Inc. West Chester, PA (215) 436-4749 EPA ID#PAD014146179		Provided transportation for RP General Ceramics drums.
Price Trucking, Inc. 1-800-825-6001 EPA ID#NYD046765574		Provided transportation for hazardous soil and RP General Ceramics pit "W" soil.
Autumn Industries, Inc. 1-800-447-2116 EPA ID#OHD986974780		Provided transportation for hazardous soil and RP General Ceramics pit "W" soil.
Page, ETC. (315) 834-6681 EPA ID#NYD986969947		Provided transportation for hazardous soil and RP General Ceramics pit "W" soil.
VOCON (215) 799-4400 EPA ID#PAD097155014		Provided transportation for hazardous soil.
Wills Trucking, Inc. (216)882-9633 EPA ID#OHD068913409		Provided transportation for hazardous soil.
John Pfrommer, Inc. (215)385-3051 EPA ID#PAD008781072		Provided transportation for crushed empty drums and PPE shipped on 9/16/93.

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AGENCY	CONTACT NAME	BRIEF DESCRIPTION OF DUTIES
RSO, Inc. P.O Box 1526/711 Gorman Avenue Laurel, MD, 20725-1526 (301)792-7444 EPA ID#MDD069279669 RAM License Number MD3302102		Provided transportation of radioactive waste for RP General Ceramics.
US Bulk Transport (814) 838-2558 EPA ID#PAD98734515		Provided transportation for hazardous soil
John Pfrommer, Inc. (215) 385-3051 USEPA ID#PAD008781072		Provided transportation of crushed empty drums/PPE, 9/16/93.
Freehold Cartage, Inc. (908) 462-1001 USEPA ID#NJDO54126164		Provided transportation of lab pack drums #7 through 11 (as transporter #1).
ENSR Operations (216) 452-0837 USEPA ID#OHD987100969		Provided transportation of lab pack drums #7 through 11 (as transporter #2).

**B. Organization of the Response**



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**C. Glossary of Abbreviations and Definitions**

ATSDR	Agency for Toxic Substances and Disease Registry
BCDOH	Bucks County Department of Health
BCEMA	Bucks County Emergency Management Agency
BNA	Base, Neutral, Acid
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DEA	Drug Enforcement Agency
DOT	Department of Transportation
EMT	Emergency Medical Technician
EPA	U.S. Environmental Protection Agency
ERCS	Emergency Response Clean-up Services
ERT	Emergency Response Team
ETI	Environmental Technologies of North America, Inc.
FAO	EPA Field Administrative Officer
FAS	EPA Field Administrative Specialist
FIT	CH2M Hill, Field Investigation Team
FP	Flash Point
NCP	National Oil and Hazardous Substances Contingency Plan
NOAA	National Oceanic and Atmospheric Association
NOS	Not Otherwise Specified
OCI	EPA Office of Criminal Investigations
OPA	EPA Office of Public Affairs
ORC	EPA Office of Regional Council
ORM	Other Regulated Material
OSC	EPA On-scene Coordinator
PADER	Pennsylvania Department of Environmental Resources
PAGC	Pennsylvania Game Commission
PASP	Pennsylvania State Police
PPE	Personal Protective Equipment
PPM	Parts Per Million
PRP	Potential Responsible Party
RAD	Radiation Absorbed Dose
RCRA	Resource Conservation and Recovery Act
REM	Roentgen Equivalent in Man
RI/FS	Remedial Investigation/Feasibility Study
RM	ERCS Response Manager
RP	Responsible Parties
RPM	EPA Remedial Project Manager
SAO	EPA Site Administrative Officer
SARA	Superfund Amendment and Reauthorization Act
TAT	Roy F. Weston, Inc., Technical Assistance Team
TCLP	Toxic Characteristics Leachate Procedure
TOC	Total Organic Carbon
TOX	Total Organic Halogens
USGS	U.S. Department of the Interior, Geological Survey
VOA	Volatile Organics Analysis

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### III. NARRATIVE OF EVENTS

In March of 1989, the Boarhead Farms Site was placed on the National Priorities List (NPL) with a hazard ranking of 33.3. The EPA Remedial Branch Field Investigation Team (CH2M Hill) began a Remedial Investigation and Feasibility Study (RI/FS). CH2M Hill conducted a routine magnetometer study of the Site which yielded 28 magnetic anomalies of substantial size and strength. Coupled with significant evidence obtained from several informants that large numbers of drums containing hazardous, and possibly explosive, materials were buried at the Site between 1969 and 1989, the RPM requested the assistance of the EPA Removal Branch to mitigate this substantial threat to the public health, welfare, and the environment. Funding in the amount of \$394,000 was approved by the Regional Administrator on February 26, 1992, to investigate and mitigate the threat to the environmental and public health posed by the Site. An access dispute with the owner of the property delayed action at the Site until an access agreement was signed on May 29, 1992.

As requested by the Remedial Project Managers for the Site, Jack Kelley and subsequently Lisa Nichols, OSC Matlock, with the assistance of the Roy F. Weston Technical Assistance Team (TAT) and the EPA Remedial Branch Field Investigation Team (CH2M Hill), performed an EPA assessment at the Boarhead Farms NPL Site on June 22 and 23, 1992. During this assessment, strong evidence of the presence of large quantities of buried drums at the Site were confirmed utilizing a magnetometer. The OSC determined that the evidence of buried drums of hazardous, and possibly explosive, materials was strong enough to initiate a Removal Action at the Site. OSC Matlock selected Environmental Technologies of North America Inc., as the Emergency Response Clean-up Services (ERCS) to supply the manpower and equipment for the removal action. Removal activities were scheduled to begin on June 29, 1992.

The EPA, TAT, and ERCS mobilized to the Site on June 29, 1992, and began preparations for Site stabilization and test trenching operations. A command post and security were established.

On June 30, 1992, ten drums which were located on the Site surface were stabilized and secured. Test trenching operations for the investigation of the presence of buried drums of hazardous materials began at the magnetic anomaly named as "W" by CH2M Hill. It was confirmed that buried drums of hazardous materials existed beneath the Site at 14:15 hours on June 30, 1992. By the close of business on July 2, 1992, over thirty drums of hazardous materials, including cyanide, corrosives, and radioactive materials, had been removed from anomaly "W". Potentially contaminated soil was being isolated in a poly lined containment cell and drums were being overpacked or the contents were being pumped into new drums and isolated in a staging area.

The OSC coordinated a pit bottom and wall sampling agenda with RPM Nichols that would meet future Remedial analytical requirements as well as provide the OSC with analytical information to determine the success of excavations in each pit. This sampling agenda was specifically designed to eliminate the unnecessary duplication by the Remedial Branch of excavation and sampling operations already performed by the Removal Branch. It was designed to meet the goals of both Branches of the USEPA with minimal cost.

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Excavation of buried drums of hazardous materials from anomaly "W" was completed, and sampling of these drums was begun, on July 18, 1992. The ERCS began test trenching operations in the remaining anomalies in order to determine the extent of drum burial at the Site. Test trenching operations were completed on July 29, 1992, and buried drums of hazardous materials were confirmed in 16 of 25 anomalies which were test trenched. The OSC determined that the extent of buried drums at the Site warranted the mobilization of a larger crew and additional equipment in order to expedite the safe and thorough excavation of these drums.

In July of 1992, OSC Matlock contacted a Potentially Responsible Party (PRP) which had been identified on several containers excavated from anomaly "W".

Between July and October of 1992, TAT identified nine additional magnetic anomalies on-site which were subsequently excavated. By the end of November, 1992, TAT had completed a magnetometer survey over approximately 88 acres, including approximately eight of a ten acre parcel adjacent to the south portion of the Site and owned by the Boarhead Corporation.

Between August and November, 1992, CH2M Hill conducted the ecological portion of the RI/FS at the Site, which included a census of flora and fauna, and sampling of the ponds and wetlands on-site.

In October of 1992, a 5,000 gallon tanker trailer was mobilized to the Site and was utilized to contain wastewater pumped from pit "K" which had a pH of 5. On October 30, 1992, the liquid in this tanker trailer was transferred into two vacuum tanker trailers and transported off-site for disposal at a wastewater treatment facility.

In November of 1992, eight roll-off boxes containing crushed empty drums excavated from the anomalies were transported off-site for disposal at a RCRA approved landfill. The ERCS contractor completed excavation activities in all of the magnetic anomalies except anomalies "C", "D", "Y", and "Z". Anomalies "C" and "D" had been confirmed as being underground fuel oil storage tanks via sampling and analysis. Anomalies "Y" and "Z" were located beneath the largest pond on-site, which was scheduled to be drained in order to access these anomalies. One thousand and forty drums had been generated and one-thousand and twelve had been sampled. Analysis compatibility results from the sampled drums had been received, and the ERCS had begun establishing disposal groups. All personnel demobilized from the Site on November 20, 1992, in order to await disposal analysis and bid disposal of the wastes generated.

Following the completion of the majority of excavation activities, excess heavy machinery and equipment was demobilized from the Site in early December, 1992.

Personnel mobilized to the Site on January 3, 1993, to begin soil and drum disposal operations. The transportation and disposal of contaminated soil began on January 6, 1993. On January 7, 1993, OSC Matlock approved General Ceramics work plan for the transportation and disposal of drums and soil excavated from pit "W".

During the month of January, 1993, TAT and CH2M Hill sampled the local residential wells which were analyzed for VOA's.

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The ERCS contractor began the transportation and disposal of drummed waste on February 5, 1993. Drum waste groups 1 through 14 were transported off-site for disposal on 2/5/93. During the month of February, all remaining soil on-site which had been deemed as non-hazardous was transported off-site for disposal. On February 22, 1993, four tandem trailers were loaded with poly soil pile covers and transported off-site for disposal. The RP, General Ceramics, transported all soil excavated from pit "W" off-site for disposal. Two additional drums were removed from the pit "W" soil pile and were sampled and analyzed for beryllium and cyanide. These drums were included with the remaining drums accepted by General Ceramics.

Drum groups 15-23 were transported off-site for disposal. TAT located two additional anomalies which were excavated and yielded less than 15 total drums. In addition, six drums were excavated from under soil piles "B" and "BB".

During the month of March, 1993, the ERCS contractor completed a pond drainage system which was inspected by PADER and the Bucks County Conservation District and approved for operation on March 9, 1993. This drainage system was initiated by the OSC and TAT on March 15, 1993.

On March 3, 1993, two tandem trailers were loaded with the used PPE and transported off-site for disposal. On March 4, 1993, the General Ceramics transported 72 drums excavated from pit "W" off-site for disposal. The ERCS contractor shipped drum waste groups 23-44 off-site for disposal on March 5, 1993. Six lab pack drums were transported off-site for disposal on March 9, 1993, and all personnel and rented equipment was demobilized from the Site between March 5 and March 10, 1993.

Throughout the month of March, TAT collected water samples from the culverts along Lonely Cottage Road and the pond drainage system which were analyzed for metals. On several occasions it was noted that the drainage system had failed and was restarted. In early April, 1993, the OSC determined that it was necessary to mobilize two ERCS personnel to the Site in order to monitor and maintain the pond drainage system. A mechanical pump was mobilized to the Site and mechanical drainage of the pond began on April 19, 1993.

On the 19th of April, 1993, TAT met with General Ceramics representative Howard Appel and his environmental consultant on-site. A contractor for General Ceramics, Radiation Service Organization, accepted two of the three drums containing radioactive material for transportation and disposal. The remaining drum was determined to contain liquid and was rejected by the driver. The two drums which were accepted by the driver were subsequently rejected by the disposal facility. On April 29th, the ERCS contractor solidified the three drums of radioactive material with concrete and RSO transported the drums off-site for disposal.

Pond drainage operations were completed on May 20, 1993, and a full crew was mobilized to the Site on Sunday, 5/23/93, to continue excavation activities. Drums were confirmed in anomaly "Z" and in three previously unnamed areas. The new anomalies were identified as "LL", "MM", and "NN". Test trenching in anomaly "Y" yielded no buried metal.

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Excavation activities were completed in all areas by June 11, 1993. Excavations in area "MM" were halted approximately 18 inches from the garage of farmhouse. It was confirmed that the garage of the house was resting on a recently poured (less than 20 years old) concrete slab and that full drums of unknown, potentially hazardous materials extended beneath this slab. Excavations were halted by the OSC because continuation would require demolition of the garage.

During a routine Site inspection by the OSC, a large number of laboratory containers were seen through a window in a portion of the laboratory building. The OSC further investigated these jars to determine the threat posed to Site workers. During this investigation, the OSC located a large quantity of unsecured pesticides, an explosive device, and a significant number of files.

During the week of June 14, 1993, Reactives Management of Chesapeake, VA was mobilized to the Site by the ERCS contractor and detonated the explosive materials on Tuesday, June 15, 1993. CH2M Hill was on-site to begin location of excavation areas and to prepare for soil sampling and a geomagnetic survey.

The OSC contacted the PRP search Section of the EPA and arrangements were made to meet with Manfred DeRewal Senior and Junior on-site to remove the files found in the laboratory building. Manfred Senior and Junior were on-site on Thursday, June 17, 1993, to witness the removal of these files. The files were secured by EPA contractors and delivered to Manfred Senior's attorney's office.

Drum sampling operations were completed and the samples were sent for disposal analysis by the ERCS contractor during the week of 6/14/93.

All personnel demobilized from the Site between June 18 and September 12, 1993 awaiting disposal analysis on the remaining drums. The Remedial Branch installed twenty-one (21) groundwater monitoring wells during this period. On September 10, 1993, TAT collected water samples from six (6) of these wells for quick analytical results.

All personnel mobilized to the Site on September 12, 1993. Between September 12, 1993, and September 17, 1993, the remaining full drums, crushed empty drums, PPE, and drum samples were transported off-site for disposal. The U.S. EPA Removal Branch Site operations were completed on Friday, September 17, 1993.

#### **IV. RESOURCES COMMITTED**

##### **A. Initial Funding Request**

The Regional Administrator approved funding for the Site on February 26, 1992, with a ceiling of \$394,000.

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**B. Additional Funding**

A request for a ceiling increase was approved by the Regional Administrator on July 24, 1992, increasing the total project ceiling to \$1,934,000. The additional funds were necessary to continue the excavation of buried drums from the Site.

A request for a ceiling increase and an exemption from the \$2 million statutory limit was approved by EPA Headquarters on September 4, 1992. The total project ceiling was increased to \$8,173,000. The additional funds were necessary to complete the excavation and disposal of buried drums and contaminated soil.

A request for additional funding from the \$50 million remedial action set aside funds for the Site were approved in the amount of \$3,500,000 by EPA Headquarters on November 11, 1992. These funds were transferred from the set aside funds and were incorporated into the total project ceiling of \$8,173,000. These funds were necessary to fund removal actions which met the criteria as described in OSWER Directive 9200.1-11, dated February 20, 1992, for quick responses at NPL Sites.

**C. Estimated Total Cost Summary**

Extramural	
ETI	\$3,636,308
TAT	\$ 292,938
Extramural Subtotal	\$3,929,246
Intramural	
EPA Direct	\$ 167,896
EPA Indirect	\$ 183,008
Intramural Subtotal	\$ 350,904
Total Project Cost (estimated)	\$4,280,150
Project Ceiling:	\$8,173,000

52.37 percent of the total project ceiling was expended.

**V. EFFECTIVENESS OF THE REMOVAL**

**A. Activities of the Various Agencies**

**1. Potentially Responsible Parties**

The owner of the property, Boarhead Corporation, Inc., with Manfred DeRewal, Sr., as president, was bankrupt. Mr. DeRewal was in prison for unrelated federal charges at the

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